

5069

Diag. Cht. No. 6102-1

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC

Field No. 23 Office No. H-5069

LOCALITY

State WASHINGTON

General locality PACIFIC COAST

Locality ALEXANDER ISLAND TO CAPE JOHNSON

194/ 30

CHIEF OF PARTY

K. T. Adams

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DATE FEBRUARY 25, 1931

B-1870-1 (1)

5069

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

REG. NO. 5069

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

Field No. 23

REGISTER NO. 5069

State WASHINGTON

General locality ~~Olympic Peninsula~~ Pacific Coast

Locality ~~Between Alexander Island~~ ^{to} Cape Johnson

Scale 1:20,000 Date of survey July - October, 19 30

Vessel U.S.C. & G.S.S. GUIDE.

Chief of Party K. T. Adams.

Surveyed by F. G. Johnson - J. C. Mathisson.

Protracted by C. J. Beyma

Soundings penciled by Max. G. Ricketts, - C. J. Beyma

Soundings in fathoms feet

Plane of reference M.L.L.W.

Subdivision of wire dragged areas by

Inked by *HC McBliss*

Verified by *HC McBliss*

Instructions dated April 16, 19 30

Remarks:

DESCRIPTIVE REPORT
to accompany

Hydrographic Sheet No. 23.
Washington Coast
1930.

AUTHORITY: Work on this sheet was executed under the DIRECTOR'S Instructions dated April 16, 1930.

LIMITS: From Alexander Island north to Cape Johnson and off shore to a junction with the ship's hydrography.

SURVEY METHODS: Standard methods for launch hydrography was used. A 65 foot ~~hired~~ launch, with a 6 foot draft, was used for most of the work on the sheet. The GUIDE'S motor-sailer ran a few lines inshore of the launch work and in places where it was hazardous to take the SEAKIST. Due to the almost constant swell and the draft of the launch, it was dangerous to run close to the beach or to a danger. In most cases, sunken rocks and breakers were located by sextant cuts or ranges from a fix position.

As a general rule ship hydrography was carried inshore to 15 fathoms, but in a few places this was impossible and it was necessary for the launch to sound in water up to 18 and 19 fathoms with a hand lead. This became difficult with the sounding chair in the original rig, off the main deck and about five feet above the water, so it was placed on top of the deck house. In this position it placed the chair about 12 feet above the water surface and made it possible to get a fathom and a half scope on the toggle. By using a 15 pound sounding lead and running the engine as slow as possible, the leadsman was able to sound as accurately as possible in this depth of water.

The compass was used to run lines throughout the work and these magnetic courses were recorded in the sounding volume.

DISCREPANCIES: A slight error in the topographic location of a rock awash in Latitude $47^{\circ}-51'$ + 1070 m, Longitude $124^{\circ}-34'$ + 894 m, was noted. Verified cuts were taken to this rock and two rocks do not exist at this position and the danger should be charted as given above.

In Latitude $47^{\circ}-48'$ +585 m, Longitude $124^{\circ}-32'$ +1180 m, a rock awash was charted in the original survey of 1894. No evidence or indication was found of this rock. At the time the work was done it was impractical to investigate the locality and the seasons work was closed before the opportunity prevailed. Also, in this vicinity there are two 10-fathom soundings and a $10\frac{1}{2}$ -fathom sounding charted by the original survey. No indication was found of these and a $6\frac{1}{2}$ -fathom sounding in Latitude $47^{\circ}-49'$ +327 m, Longitude $124^{\circ}-32'$ +888 m. A 10-fathom spot was found in this locality, but it does not check the location on the original survey. *This rock and also shoal soundings should be retained, as none were investigated closely enough to disprove. The rock has 4 ft over it, is surrounded by 13 fathoms and does not break in smooth weather. See for 2 c (gen), #2233. R.L.G.*

The soundings between 1-f day and 13-f day, and 35-f day and 47-f day are placed a little too far apart. This was due to a fair breeze and current on the day the work was done.

There is a discrepancy ¹² in the soundings in the four outside lines west of Cake Rock from James Island to the northern limit. This is probably due to the strong current and south-easterly breeze that prevailed on the day the work was done.

DANGERS: The area covered by this sheet is comparatively free from dangers.

Off Teahwhit Head at Latitude $47^{\circ}-52'$ +76 m, Longitude $124^{\circ}-37'$ +792 m, a least sounding of 4-fathoms - 4-feet, Position 20-h, was recorded. Drift soundings were taken over this spot for one hour. It is probably a sharp pinnacle, as the spot was hard to locate and less water might exist.

In Latitude $47^{\circ}-50'$ +498 m, Longitude $124^{\circ}-34'$ +566 m, there is a sunken rock that is dangerous to fishing vessels close in-shore. At the time the survey was made it was impossible to get a least depth over the rock, but it is probably covered by one foot of water at M.L.L.W.

The rock at Latitude $47^{\circ}-47'$ +1725 m, Longitude $124^{\circ}-32'$ +161 m, is bare $9\frac{1}{2}$ feet at M.L.L.W. and is dangerous to small boats close inshore. Just inshore from this rock there is a rock 44 feet high (Δ Forty) that is quite conspicuous.

CHANNELS: A clear, deep channel exists inshore from Cake Rock. Fishing tenders leaving the Quillayute River going north, carry Cake Rock to the port and proceed to the east of Jagged Island and Carroll Island (Sheet 24). In using this channel care should be taken to give James Island a good berth in order to avoid the rocks lying to the west and north-west of the island.

ANCHORAGES: Through out the period of the survey the Quillayute River was used for an anchorage. The bar at the mouth of the river was not investigated by the party, but soundings were taken frequently when coming to an anchorage. It was found that a launch the size of the SEAKIST, (6 foot draft) , could make the bar on a four foot tide or better. Ranges are maintained by local interests for making the bar. After crossing the bar and making the right turn into the river, best water is found close to the east bank. Here the bank is steep. Best anchorage, 7 feet at M.L.L.W. with gravel bottom, will be found just north and to the west of the pile dolphins near the east shore. On an ebb tide the current is very strong. Gasoline and water may be purchased from barges on the river during the fishing season, and mess provisions can be had from stores maintained in La Push and Moro.

COMPARISON WITH PREVIOUS SURVEYS: A comparison shows that work of the two seasons compare very well. Due to poor control in the original survey, dangers and shoals show a slight difference, but relative distance is the same.

GEOGRAPHIC NAMES: See the Descriptive Report, Topographic Sheet Register No. 4448 and 4449 (1929)

Respectfully submitted,

John C. Mathisson

John C. Mathisson,
Jr. H & G Engineer,
U.S.C. & G.S.S. GUIDE.

JCM/s

Forwarded, approved:

K.T. Adams

K. T. Adams,
Commanding Officer,
Steamer GUIDE.

STATISTICS

Sheet No. 23.
Washington Coast 1930.

DAY	BOAT	NO. POS.	NO. SND'GS.	STAT. MI.	VOLUME.
a	SEAKIST	95	389	21.8	1
b	"	69	263	17.2	1
c	"	108	379	25.8	1
d	"	18	63	3.8	1
e	"	34	119	7.2	1
f	"	65	206	16.3	1 & 2
g	"	101	360	23.2	2
h	"	26	78	5.4	2
j	"	21	61	4.1	2
k	"	124	370	17.7	2
l	"	58	212	14.4	2
a	MOTOR-SAILER	31	81	4.1	3
b	"	101	292	17.0	4
TOTAL -		851	2873	178.0	

VERIFICATION REPORT
to accompany

Hydrographic Sheet No. 23
Washington Coast

This is to certify that I have examined the completed smooth sheet and records and hereby approve same.

Less than the usual amount of supervision was had over the field work, most of it being done by a detached party, contact with which was rarely made on the working ground. However, each time in port the boat sheet was examined and discussed with the officer in actual charge of the work.

K. T. Adams
K. T. Adams,
Commanding Officer,
Steamer GUIDE.

KTA/s

1948
16

March 3, 1931.

Division of Hydrography and Topography:

Division of Charts:

Tide Reducers are approved in
4 volumes of sounding records for

HYDROGRAPHIC SHEET 5069

Locality Washington Coast, Alexander Island to Cape Johnson

Chief of Party: K. T. Adams, in 1930,
Plane of reference is mean lower low water, reading
3.8 ft. on tide staff at La Push
17.2 ft. below B. M. 4

Condition of records satisfactory except as checked below:

1. Locality and sublocality of survey omitted.
2. Month and day of month omitted.
3. Time meridian not given at beginning of day's work.
4. Time (whether A.M. or P.M.) not given at beginning of day's work.
5. Soundings (whether in feet or fathoms) not clearly shown in record.
6. Leadline correction entered in wrong column.
7. Field reductions entered in "Office" column.
8. Location of tide gauge not given at beginning of day's work.
9. Leadline corrections not clearly stated.
10. Kind of sounding tube used not stated.
11. Sounding tube No. entered in column of "Soundings" instead of "Remarks".
12. Legibility of record could be improved.
13. Remarks.

Paul T. Whitney

Chief, Division of Tides and Currents.

Section of Field Records

Sheet No 5069

Surveyed in 1930

Chief of Party - H. T. Adome

Surveyed by H. G. Johnson and

J. C. Mathiason

Protracted by C. J. Beyma

Soundings Plotted by - Max E. Pickett
and C. J. Beyma

Verified & Inked by - H. M. Glisson

1. The records conform to the requirements of the general instructions.
2. The plan and character of development fulfill the requirements of the general instructions.
3. There are very few cross lines on this sheet but those that do cross are found to be satisfactory.
4. The usual depth curves can be completely drawn within the limits of the sheet. There are a number of rocks on this sheet and the bottom along the shore line is very rough and rocky. Consequently it is hard

to tell, in some places, just
when the depth curves run.
However in most places they
are very smooth and satisfactory.

5. The field plotting was completed
to the extent prescribed in
General Instructions.

6. The office ^{draftsman} did not have to
do over any part of drafting done
by field party, except as noted
on statistic sheet.

7. The junctions with adjacent
sheets were not examined at this
time because the adjacent
sheets have not been verified
and inked. However when
they have been inked and
verified an examination will
be made at that time.

8. Remarks:

I The pencil work on this
sheet was entirely too heavy and
could not be erased. The soundings
in pencil were much too large
and as they were very heavy
it was impossible to remove
them from the sheet without
destroying the ink. Therefore
they were left on the sheet.

II In long $124^{\circ} 36' + 313m$, lat $47^{\circ} 51' + 1474m$ there is only one rock shown on the topographic sheet. However the cuts that were taken show that a second rock exists and in all probability there are two rocks as shown on the hydrographic sheet H 5069. The topographic party possibly could not see the second rock as it is in a direct line with the first rock shown on the topographic sheet.

In long $124^{\circ} 33' + 734m$ and lat $47^{\circ} 50' + 380m$ there are three rocks shown on hydrographic sheet 5069. However on the topographic sheet there is only one rock shown. In this case the three rocks possibly exist as they were recorded on the boat sheet.

In long $124^{\circ} 33' + 191m$ and lat $47^{\circ} 00' + 698m$ - there is a rock shown on hydrographic sheet 5069. The topographic sheet does not show this rock and the sounding records refer to no cuts whatsoever. However in all probability the rock does exist as this coast is very rocky and this rock is shown in four areas.

In long $124^{\circ}32' + 30m$ and lat $47^{\circ}49' + 973m$ there are two sunken rocks shown on the boat sheet 5069 and only one of these rocks is mentioned in the sounding records. These rocks are not shown on the topographic sheet. However as they are shown very close together and due to the rocky formation in all probability they both exist as shown on the boat sheet 5069.

Respectfully submitted,
E. M. Clason

AND REFER TO No. 82-AAP

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

WASHINGTON

July 1, 1931.

Section of Field Records

Report on Hydrographic Sheet No. 5069

Alexander Island to Cape Johnson, Coast of Washington

Surveyed in 1930

Hand lead soundings

Instructions dated April 16, 1930. (Guide)

Chief of Party - K. T. Adams

Surveyed by - F. G. Johnson, J. C. Mathisson

Protracted by - C. J. Beyma

Soundings plotted by - M. G. Ricketts, C. J. Beyma

Verified and inked by - G. C. McGlasson

1. The records conform to the requirements.
2. The plan, character and extent of the survey satisfy the general and specific instructions.
3. Practically no cross lines were run. Adjacent lines agree fairly well.
4. The ten fathom curve can be fairly completely drawn from the information furnished. The curves in depths under ten fathoms can only be partially indicated.
5. The junctions with the adjacent contemporary sheets H. 5070, H. 5108 and H. 5110 will be reported in the reviews of those sheets when they are completed.

The junction in the area south of James Island, with the survey of 1924, H. 4396, is satisfactory. The position of rocks and breakers in the area west and northwest of James Island should be taken from this sheet, H. 5069, as they are evidently incorrectly shown on T. 4090.

The topographic reconnaissance of 1887, T. 1787 and

and T. 1788, should be superseded by the recent topographic surveys, T. 4448 and T. 4449. These recent surveys are not complete for rocks and dangers many of which were located by the hydrographic party.

6. Comparison with previous work.

North of Lat. $47^{\circ}-55'$, the new hydrography agrees fairly well with the survey of 1891, H. 2096, which should be generally superseded by the later work on H. 5069.

South of Lat. $47^{\circ}-55'$ to Alexander Island the agreement with the survey of 1894, H. 2203, is not so good. It is thought that the selection of soundings for charting, should be made principally from the new work, as the work on H. 2203 is dependent on a reconnaissance location of the shore-line for position. However it is not intended that the most critical soundings on H. 2203 should be discarded as the development on the new work is not close enough to disprove them. These soundings have been plotted on this sheet, H. 5069, in red but their position is very approximate as it was necessary to transfer them in their relation to shore-line and other natural features because the projection on H. 2203 is known to be incorrect.

A $3\frac{1}{4}$ fathom sounding shown on H. 2203 in approximate Lat. $47^{\circ}-49.3'$, Long. $124^{\circ}-32.7'$, should be retained.

A $6\frac{1}{2}$ fathom sounding shown on H. 2203 in approximate Lat. $47^{\circ}-49.2'$, Lon. $124^{\circ}-32.7'$ should be retained.

A 10 fathom sounding shown on H. 2203 in approximate Lat. $47^{\circ}-49.45'$, Long. $124^{\circ}-34.45'$ should be retained.

A 10 fathom sounding shown on H. 2203 in approximate Lat. $47^{\circ}-47.3'$, Long. $124^{\circ}-32.1'$ should be retained.

In approximate Lat. $47^{\circ}-48.7'$, Long. $124^{\circ}-32'$, there is a rather extensive shoaling on H. 2203 with depths slightly under 10 fathoms, extending westward from the rock on which signal Blat is located. The new work shows no indication of this shoal and since the bottom is sandy there is a probability that it has deepened and it is recommended that this shoal be omitted from the chart.

7. Rocks and dangers.

Most of the rocks as determined on the new work are

in approximately the same relative position as shown on the old survey, H. 2203, but there are several rocks on H. 2203 which were not located on H. 5069.

There is a group of rocks in approximate Lat. $47^{\circ}-52.8'$, Long. $124^{\circ}-38.25'$ shown on H. 2203. These fall in a blank area on H. 5069 and should be carried on the chart.

There is a small bare rock shown on H. 2203 in approximate Lat. $47^{\circ}-50'$, Long. $124^{\circ}-34'$. This rock is not on the old topographic sheet and no mention of it could be found in the records of H. 2203. As the new topographic survey does not show this rock and a fairly close hydrographic examination on H. 5069 also fails to show any trace of this rock, its existence is doubted and its removal from the chart recommended.

Important.

In Lat. $47^{\circ}-48.3'$, Long. $124^{\circ}-33'$, a rock awash is shown on H. 2203. This rock is well located and described in the records of H. 2203 at pos 2 e(green). The rock has four feet over it, is surrounded by 13 fathoms, is of small extent and does not break in smooth weather. A check on this rock would have been desirable but the rock was not investigated by the field party due to lack of time. This rock should be continued on the chart where it is now charted as $\frac{1}{2}$ fathom.

Two rocks in the vicinity of Lat. $47^{\circ}-48.7'$, Long. $124^{\circ}-30'$, are located from sounding lines in the records of H. 2203 and should be retained.

In come cases a duplication of rocks may have been caused by showing both the topographic and hydrographic determination, as in the case of the rocks shown in Lat. $47^{\circ}-51.8'$, Long. $124^{\circ}-36.3'$, and also the rocks in Lat. $47^{\circ}-50.2'$, Long. $124^{\circ}-33.6'$. As all of these rocks were inked on H. 5069 by the field party they were left as shown.

8. The prescribed amount of field plotting was done by the field party. The protracting was satisfactory but some of the figures used in plotting the soundings were too large and sprawling and too hard a pencil which indented the paper was used. The features outside the low water line were not neatly transferred and inked.

9. Character and scope of surveying.

While 200 meter spacing has generally been maintained the survey does not appear very complete as very little development was done. A closer examination of some of the most critical soundings on the old survey would have been desirable. In Lat. $47^{\circ}-52.7'$, Long. $124^{\circ}-38'$, the ten fathom curve is not well defined.

The rock shown in Lat. $47^{\circ}-48.3'$, Long. $124^{\circ}33'$ on H. 2203 and described in par. 7 should have been verified as it is probably one of the most dangerous within the limits of this work because it can not be seen in calm weather.

10. While the survey is not considered very complete particularly close inshore, no additional lead line work is recommended since it is unlikely that anyone would go close in and in the off shore areas where rocks are numerous and abrupt only the wire drag could prove the area entirely free from dangers.

11. Reviewed by R. L. Johnston, June 30, 1931.

Inspected by E. P. Ellis.

Approved
A. M. Sobieralski
J. S. Jordan

July 1, 1931.

Section of Field Records

Report on Hydrographic Sheet No. 5069

Alexander Island to Cape Johnson, Coast of Washington

Surveyed in 1930

Hand lead soundings

Instructions dated April 16, 1930. (Guide)

Chief of Party - K. T. Adams

Surveyed by - P. G. Johnson, J. C. Mathisson

Protracted by - C. J. Beyma

Soundings plotted by - H. G. Ricketts, C. J. Beyma

Verified and inked by - G. C. McGlasson

1. The records conform to the requirements.
2. The plan, character and extent of the survey satisfy the general and specific instructions.
3. Practically no cross lines were run. Adjacent lines agree fairly well.
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The junction in the area south of James Island, with the survey of 1924, H. 4396, is satisfactory. The position of rocks and breakers in the area west and northwest of James Island should be taken from this sheet, H. 5069, as they are evidently incorrectly shown on T. 4090.

The topographic reconnaissance of 1887, T. 1787 and

and T. 1798, should be superseded by the recent topographic surveys, T. 4448 and T. 4449. These recent surveys are not complete for rocks and dangers many of which were located by the hydrographic party.

6. Comparison with previous work.

North of Lat. 47° - $55'$, the new hydrography agrees fairly well with the survey of 1891, H. 2096, which should be generally superseded by the later work on H. 5069.

South of Lat. 47° - $55'$ to Alexander Island the agreement with the survey of 1894, H. 2203, is not so good. It is thought that the selection of soundings for charting, should be made principally from the new work, as the work on H. 2203 is dependent on a reconnaissance location of the shore-line for position. However it is not intended that the most critical soundings on H. 2203 should be discarded as the development on the new work is not close enough to disprove them. These soundings have been plotted on this sheet, H. 5069, in red but their position is very approximate as it was necessary to transfer them in their relation to shore-line and other natural features because the projection on H. 2203 is known to be incorrect.

A $5\frac{1}{2}$ fathom sounding shown on H. 2203 in approximate Lat. 47° - $49.8'$, Long. 124° - $32.7'$, should be retained.

A $6\frac{1}{2}$ fathom sounding shown on H. 2203 in approximate Lat. 47° - $49.2'$, Long. 124° - $32.7'$ should be retained.

A 10 fathom sounding shown on H. 2203 in approximate Lat. 47° - $49.45'$ Long. 124° - $34.45'$ should be retained.

A 10 fathom sounding shown on H. 2203 in approximate Lat. 47° - $47.5'$, Long. 124° - $32.1'$ should be retained.

In approximate Lat. 47° - $48.7'$, Long. 124° - $32'$, there is a rather extensive shoaling on H. 2203 with depths slightly under 10 fathoms, extending westward from the rock on which signal Blat is located. The new work shows no indication of this shoal and since the bottom is sandy there is a probability that it has deepened and it is recommended that this shoal be omitted from the chart.

7. Rocks and dangers.

Most of the rocks as determined on the new work are

In approximately the same relative position as shown on the old survey, H. 2203, but there are several rocks on H. 2203 which were not located on H. 5069.

There is a group of rocks in approximate Lat. 47° - $52.8'$, Long. 124° - $38.25'$ shown on H. 2203. These fall in a blank area on H. 5069 and should be carried on the chart.

There is a small bare rock shown on H. 2203 in approximate Lat. 47° - $50'$, Long. 124° - $34'$. This rock is not on the old topographic sheet and no mention of it could be found in the records of H. 2203. As the new topographic survey does not show this rock and a fairly close hydrographic examination on H. 5069 also fails to show any trace of this rock, its existence is doubted and its removal from the chart recommended.

Important.

In Lat. 47° - $48.3'$, Long. 124° - $35'$, a rock awash is shown on H. 2203. This rock is well located and described in the records of H. 2203 at pos 2 e (green). The rock has four feet over it, is surrounded by 15 fathoms, is of small extent and does not break in smooth weather. A check on this rock would have been desirable but the rock was not investigated by the field party due to lack of time. This rock should be continued on the chart where it is now charted as $\frac{1}{2}$ fathom.

Two rocks in the vicinity of Lat. 47° - $48.7'$, Long. 124° - $30'$, are located from sounding lines in the records of H. 2203 and should be retained.

In some cases a duplication of rocks may have been caused by showing both the topographic and hydrographic determination, as in the case of the rocks shown in Lat. 47° - $51.8'$, Long. 124° - $35.3'$, and also the rocks in Lat. 47° - $50.2'$, Long. 124° - $33.6'$. As all of these rocks were inked on H. 5069 by the field party they were left as shown.

8. The prescribed amount of field plotting was done by the field party. The protracting was satisfactory but some of the figures used in plotting the soundings were too large and sprawling and too hard a pencil which indented the paper was used. The features outside the low water line were not neatly transferred and inked.

9. Character and scope of surveying.

While 200 meter spacing has generally been maintained the survey does not appear very complete as very little development was done. A closer examination of some of the most critical soundings on the old survey would have been desirable. In Lat. 47° - $52.7'$, Long. 124° - $33'$, the ten fathom curve is not well defined.

The rock shown in Lat. 47° - $48.3'$, Long. 124° - $33'$ on H. 2203 and described in par. 7 should have been verified as it is probably one of the most dangerous within the limits of this work because it can not be seen in calm weather.

10. While the survey is not considered very complete particularly close inshore, no additional lead line work is recommended since it is unlikely that anyone would go close in and in the off shore areas where rocks are numerous and abrupt only the wire drag could prove the area entirely free from dangers.

11. Reviewed by R. L. Johnston, June 30, 1931.

Inspected by E. P. Ellis.

Field Records Section (Charts)

HYDROGRAPHIC SHEET No. 50.69

The following statistics will be submitted with the
cartographer's report on the sheet:

Number of positions on sheet	854
Number of positions checked	183
Number of positions revised	3
Number of soundings recorded	2873
Number of soundings revised	37
Number of signals erroneously plotted or transferred	None

Date: 1 April 1931

Cartographer: E. M. Glendon